

MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

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No. 6

EDWIN DUNKIN, F.R.S., President, in the Chair.

Lieut. Sidney Gerald Burrard, R.E., Dehra Dun, India;

Rev. James Hardy Honeyburne, M.A., 97 Mulgrave Street,
Liverpool;

James McKerrow, Surveyor-General of New Zealand, Wel-
lington, N.Z.

John A. Westwood Oliver, Braehead House, Lochwinnoch,
N.B., and 13 Bruton Street, Berkeley Square, W.; and

Major Harry T. Watson, Langley House, Slough, Bucks,
were balloted for and duly elected Fellows of the Society.

*On an Observation of the Projection of Jupiter's First Satellite on
its own Shadow, made at Dun Echt, Aberdeen.* By Dr. R.
Copeland.

(Communicated by the Earl of Crawford and Balcarres.)

While sketching *Jupiter* on February 18, 1885, I saw an ex-
ceedingly black short line extending east and west, slightly to
the north of the planet's equator. In moments of the best
definition it seemed lenticular (bi-convex) in shape. On con-
sulting the *Nautical Almanac*, however, it turned out to be really
the shadow of Satellite I. on the planet, almost totally occulted
by the satellite itself. A sketch was made representing the
appearance about 11^h 45^m G.M.T., as seen with a power of 229
on the 15-inch Equatorial. As the satellite approached *Jupiter's*
preceding limb it came out quite bright and large, with a mere
crescent of the shadow showing on its southern edge.

F F

The great "red" spot was distinctly visible, although it is now of a pale sandy colour, somewhat whiter along its major axis. It exhibits a certain amount of delicate structure parallel to its margin. The red spot was on the central meridian at $12^{\text{h}} 10^{\text{m}}$ G.M.T.

As the opposition of *Jupiter* occurred at 8 A.M. on February 19, it seemed not improbable that the transit of the 2nd satellite on that day, and of the 1st satellite on the 20th, might also be attended by a partial concealment of their shadows. Telegraphic notice was accordingly sent to several correspondents inviting co-operation.

Near the middle of the transit of the 2nd satellite's shadow on the 19th, the shadow seemed almost perfectly round, the satellite being indistinguishable without an exact knowledge of its position. It was not until about half an hour before the egress, when the satellite began to be plainly visible, that it appeared to encroach upon its shadow to an appreciable extent. In this instance, therefore, the diminution of the shadow seems to have been quite as much due to the irradiation of light around the relatively bright satellite, as to an actual occultation of the shadow. A second drawing was made showing the slight deformation of the shadow, and also giving the detail of the belts as they appeared about $14^{\text{h}} 15^{\text{m}}$ G.M.T. The observed Greenwich mean times at egress were:

					h	m	s
II.	Tr. E. begins	...	...		14	28	8
II.	Tr. E. ends	...	...		14	32	53
II.	Sh. E. ends	...	...		14	33	53

Dun Echt Observatory:
1885, April 6.

Occultation of Aldebaran, 1885, February 22, observed at Dun Echt, Aberdeen. By Dr. R. Copeland.

(Communicated by the Earl of Crawford and Balcarres.)

Occultation of Aldebaran, 1885, February 22.

	Dun Echt M.T.	Instrument.	Power.	Observer.
	h m s			
Disappearance	4 56 0.1	15-in. Grubb	132	Ralph Copeland
Reappearance	5 [52] 39.9	"	"	"
Disappearance	4 56 0.35	6-in. Simms	94	J. G. Lohse
Reappearance	5 52 41.2	"	"	"

In each case the phenomenon was instantaneous. A strong gale was blowing at the time.